

# Animal Science & Technology, Advanced

**Levels: Grades 11-12**

**Units of Credit: Year (1.0)**

**CIP Code: 020241**

**Prerequisite: Animal Science & Technology, Entry  
Biology-Agricultural Science and Technology or Biology**

## **COURSE DESCRIPTION**

Students will be introduced to equine science and production management and poultry science and production management. They will be exposed to the management practices associated with the handling of animal waste, livestock breeding and genetics, and the importance of anatomy and physiology in animal management practices. They will also be introduced to the practices associated with small animal care.

## **CORE STANDARDS, OBJECTIVES, AND INDICATORS**

### **STANDARD**

**020241-01 Students will develop an understanding of the role of FFA in Agricultural Education Programs.**

### **OBJECTIVES**

- 020241-0101 Students will explain FFA officer duties and responsibilities.
- Students will describe the duties and responsibilities of chapter FFA officers.
  - Students will explain the proper dress and characteristics of a good FFA leader.
- 020241-0102 Students will Plan and organize an FFA meeting.
- Students will explain how to plan a meeting and develop the order of business.
  - Students will describe how to set up the meeting room.
  - Students will explain the parliamentary procedure used in an FFA meeting.

### **STANDARD**

**020241-02 Students will understand the benefits of a Supervised Agricultural Experience (SAE) Program.**

### **OBJECTIVES**

- 020241-0201 Students will keep and use SAE records.
- Students will explain how SAE records are organized.
  - Students will identify the procedures to making entries in the SAE records.
  - Students will explain how to summarize and analyze the SAE records.
- 020241-0202 Students will make long range plans for expanding SAE Programs.
- Students will identify the factors that should be considered in expanding an SAE program.

- Students will explain how placement and ownership SAE programs may be expanded.

## **STANDARD**

**020241-03 Students will analyze equine science and management.**

### **OBJECTIVES**

- 020241-0301 Students will explore the equine industry.
- Identify equine terminology.
  - Discuss equine marketing options and economic importance.
  - Explain selection of superior animals.
  - List necessary equipment, supplies, and facilities for proper care of equine.
  - Describe characteristics of horse breeds.
  - Demonstrate methods of handling horses safely.
- 020241-0302 Students will determine the nutritional requirements of horses.
- 020241-0303 Students will explain the methods of maintaining horse health and soundness.

## **STANDARD**

**020241-04 Students will analyze poultry science and management.**

### **OBJECTIVES**

- 020241-0401 Students will explore the poultry industry.
- Describe poultry as organisms and identify external parts.
  - Identify poultry terminology.
  - Explain production systems and marketing of poultry.
  - List and describe kinds and breeds of poultry.
- 020241-0402 Students will determine the nutritional requirements of different kinds of poultry.
- 020241-0403 Students will explain methods of maintaining poultry health and soundness.

## **STANDARD**

**020241-05 Students will design a system to handle and dispose of animal waste.**

### **OBJECTIVES**

- 020241-0501 Students will manage livestock waste.
- 020241-0502 Students will examine current animal waste regulations.
- 020241-0503 Students will describe proper techniques of applying wastes to fields.
- 020241-0504 Students will plan and design a waste disposal system.

## **STANDARD**

**020241-06 Students will apply the principles of genetics and breeding to livestock improvement.**

### **OBJECTIVES**

- 020241-0601 Students will define genetic engineering.
- 020241-0602 Students will outline the embryo transfer process.
- 020241-0603 Students will describe recombinant DNA transfer.

**STANDARD**

**020241-07 Students will examine anatomy and physiology in livestock species.**

**OBJECTIVES**

020241-0701 Students will identify the external anatomy of each species of livestock.

- Beef cattle.
- Dairy cattle.
- Swine.
- Sheep & Goats.

020241-0702 Students will identify parts of the major bodily systems of livestock.

- Digestive system.
- Nervous system.
- Reproductive system.

020241-0703 Students will identify the epithelial, connective, and muscular tissue on species of livestock.

**STANDARD**

**020241-08 Students will analyze the small animal care industry.**

**OBJECTIVES**

020241-0801 Students will explore common small animals.

- Dogs.
- Cats.
- Rabbits.
- Aquaculture.
- Other small animals.

020241-0802 Students will define zoonosis and list common types.